

Effectiveness and Applicability of Internet-Based Training in the Corporation – Case of Egypt

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Abstract

Learning is the most indispensable activity in the current knowledge-based economy where firms, in order to compete and survive, must be constantly alert, capable of adapting to fast change, constantly learn, evolve, and transform themselves rapidly. In that respect, the use of innovative information and communication technology is perceived to play a key role in the development of new learning platforms and mechanisms. One of the emerging solutions is electronic training “eTraining”, which is a growing trend and is expected to become crucial in meeting newly introduced challenges and in catering for changing and diversified market needs. The global connectivity of the Internet and the availability of innovative information and communication technology are factors that have contributed in catalyzing the new Internet-based learning paradigm offering great opportunities for organizations to educate and train their management and staff. However, Internet-based training poses several considerable challenges for various organizations especially those operating in developing countries

Within the context of transferring and using information and communication technology into developing countries, this paper demonstrates the outcome of a research aiming at investigating the effectiveness and applicability of Internet-based training in providing training for organizations in Egypt. The focus of the research was mainly soliciting the opinions of three different groups of stakeholders; human resources or training managers responsible for setting training policies; instructors responsible for facilitating courses and preparing material; and trainees undertaking the training.

Introduction

In today's fast changing and competitive global environment, the need for highly-skilled people in the workplace is growing. Both private and public

organizations are realigning, reengineering, retooling, redefining, redesigning, rethinking, resizing, retrofitting, repositioning, renewing, and reinventing themselves to meet the demands of increasingly demanding customer base [Neilson, 1997]. Thus, organizations that will not be able to continuously upgrade their competitiveness will be swept from the marketplace [Martin, 1996]. Respectively, organizations are under pressure for enhancing the knowledge and the skills of their employees and workers. For Egypt, as a developing country, that is striving to integrate into the global economy the pressure is be even tougher [Kamel, 1998].

eTraining is expected to become crucial to meet the growing challenges. eTraining refers to any type of training that uses the Internet to deliver electronic instructional materials. During the 21st century, eTraining is expected to play an increasingly important role in education and training worldwide [Steil, et al, 1999]. In the past decade, a dramatic shift to eTraining as part of the learning process has taken place in the world of education. The percentage of organizations using eTraining to train their employees grew from 16% in 2000 to 24% in 2001. eTraining offers great opportunities for corporations to train their staff with increasing volume while controlling the cost element. However, there are several considerable challenges and barriers for the successful implementation of online training for corporations in developing nations such as Egypt.

eTraining as a Global Trend

The learning process is characterized by rapid change, globalization, intensive competition, and information technology evolution [Leidner and Jarvenpaa, 1995]. In the digital economy, corporations in order to survive, must be constantly alert, capable of adapting to fast change, constantly learn, evolve, and be transformed rapidly. The Internet is one of the most transforming inventions in human history. It has the capacity to change everything, the way people work, learn and play. In a recent world wide survey of 500 large

companies carried out jointly by the Economist Intelligence Unit and Booz Allen and Hamilton, a consultancy firm, found that more than 90% of senior executives and top managers believe the Internet will transform the global marketplace. One of such transformations that will be introduced by the Internet is the way people learn, which relates to the investment in humanware and as perceived to be the oil of the 21st century [Kamel, 2002].

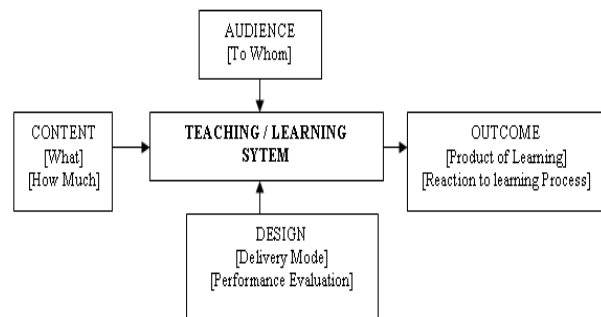
The global connectivity of the Internet, its ability to rapidly deliver and store vast amounts of educational content, and the availability of new generations of hardware and software applications are factors that have contributed in fueling the new eTraining paradigm [Alavi, Yoo and Vogel, 1997]. Respectively, time and distance are not anymore deterrents to education and learning because various courses can be delivered to students' desktops anytime, anywhere, through instructor-led or self-paced learning mechanisms [El Kosheiry and Elazhary, 2001]. Harasim [1990] summarized the characteristics of online courses as place and time independent, many-to-many communication that fosters real collaborative learning and dependence on text-based communications to promote thoughtful and reflective commentary. eTraining can be provided through the use of a variety of web-based instruction systems. Liegle and Meso [2000] point out that the web-based instruction systems should be composed of six components, which include browsers, groupware, authoring software, course management and communications software.

Browsers enable learners to access and interact with web content. Software that facilitates collaboration between temporary and geographically dispersed peers is termed groupware. Authoring software is the set of programs that facilitates creation of instruction resources. Management software allows to control and coordinate content delivery of the course. As for the communication software, they enable peer-to-peer and instructor-learner communication including synchronous communication software that enables real-time communication and includes chat-rooms, voice and video conferencing, among others and asynchronous communications software, which includes electronic mail, bulletin boards, but supports no real-time communications.

There is an ongoing debate about the relative effectiveness of eTraining versus traditional classroom training. Some earlier literature [Salopek, 2002; El Kosheiry and Elazhary, 2000; Hugli and Wright, 2000] provided substantial evidence that there is no significant difference between the two instructional methods, as far as learning outcome is concerned which represents an important factor in building trust and confidence in quality deliverable of knowledge at the learner's pace. According to Nguyen and Kira [2000], content, audience affects the efficiency of any teaching and learning

system, measured by learning outcome, and design issues as indicated in figure 1.

Figure 1 - Efficiency of Teaching/Learning System



In considering content issues, one should address questions such as what is the need for a greater understanding of subject matter, the content to be communicated, and the justification in choosing this content for the new given limited resources. The audience issues address questions such as who needs the content, what are the characteristics of intended audience with respect to the course content and the size of target group to justify the effort. Finally, the design issues address questions such as which content needs can be best applied to communicate the content efficiently. The issues relate to the appropriateness of delivery and performance evaluation modes. If all the three sets of issues are well planned and interrelate conveniently, there is a high expectancy that the course, whether online or conventional, be successful and reach the desired outcomes.

Some observers believe that the web will transform the process of learning. According to the International Data Corporation, the future of corporate eTraining looks extremely bright with expected worldwide revenues beyond 23 billion US dollars by 2004 which is extraordinary considering the market was less than 2 billion US dollars at yearend 1999. North America represents the largest opportunity for corporate eTraining accounting for over 66% of worldwide revenues through 2004 as for Western Europe, it will be the fastest-growing market, increasing its revenues at a compound annual growth rate (CAGR) of 97% from 1999 to 2004. In comparison, revenues in the worldwide market will increase at a CAGR of 69%. IDC estimates that by 2005 over 27% of business skills training content will be provided via eTraining, representing a compound annual growth rate of 108.2% over a five-year period. It is important to note that a key to the market's growth is the extension of eTraining's reach beyond traditional staff training applications to support sales and customer service initiatives and to train distributors, customers and suppliers. Among the different methods used by businesses to train employees during 2000 and 2001, eTraining has increase from 16% in 2000 to 24% in 2001,

which clearly points out that eTraining is expected to play a major and crucial role in training provision in the years to come.

eTraining have been widely discussed in the literature [Deitel et Al, 2001; El Kosheiry and Elazhary, 2000; Nguyen and Kira, 2000; Schrum, 2000; Hugli and Wright, 2000; Whalen and Wrigth, 1998; Porter, 1998]. Time and location flexibility, cost and time saving, self-paced learning and unlimited use of learning materials are the main perceived advantages of Internet-based training. eTraining eliminates the barriers of time and distance by offer learning any-time any-place. Moreover, since learners do not have to travel to a specific location, Internet-based training can lead to significant cost saving on indirect expenses [Kamel, 2000]. It is reported that corporations using online training can expect an average of 50% in timesaving and 40% to 60% in cost saving, compared with conventional training [Khirallah, 2000]. Additionally, eTraining fosters self-directed and self-paced learning by enabling leaner-centered activities. Finally, eTraining allows unlimited access and retrieval of electronic learning materials and with the great ease for updating of the training materials, the electronic material can be kept up to date and high quality [Mitchell, 2002].

However, eTraining is faced with a number of challenges. According to the literature [Berge and Smith, 2000; Myer-Peyton, 2000; Schrum, 2000; Hugli and Wright, 2000; Porter, 1998] some of the anticipated challenges which may delay the adoption of the technology as a key training tool, or limit the full integration include user readiness and support, basic literacy, and computer literacy. Internet-based training is a new and in many cases untested way of delivery of training. Therefore, the end-user will need to be willing to change the way they are accustomed to in learning, which indicates that a gradual introduction, adoption, diffusion and adaptation process needs to be introduced to establish a strong presence for a new effective training mechanism. The introduction of eTraining will undoubtedly require online and offline user support as part of a hybrid solution in the early phases to build the trust with end-users. Another important factor is computer literacy where the utility of web-based training will be largely dependent on the user's ability to read, and to comprehend the information being delivered in addition to the comfort with a computer and knowledge to use the computer and access the Internet will be foregone required necessities.

Additional barriers include access to a computer, access to the Internet and web performance. Growth in penetration of computers and Internet is positive, however, for those without access, eTraining is not an option. Initial set up costs may be a prohibiting factor for some potential users. Although computer costs have declined significantly, and access fees to the Internet are

nominal, there is still hesitance on the part of many firms to invest money in their personal development until their businesses are profitable. Moreover, in some cases the web performance is slow due to hardware and software technology limitations for highly interactive applications, which may limit the use and flexibility of different training options. Bandwidth and browser limitations may restrict the instructional methodologies used resulting in slower performance for sound, video and graphics and delays may be experienced leading to frustrating the user, and limiting future participation. Moreover, executive support and demonstrated commitment is perceived as another barrier because support will be required in the form of initial investment, as well as in ongoing maintenance support. Corporate leaders will need to ensure a long-term view to eTraining support to ensure it does not diminish the quality, accuracy, and timeliness of the training provided. Finally, security and ownership rights are additional barriers that need to be taken into account. The above mentioned barriers were highlighted by Online Learning which commissioned IDC to survey its readers, so respondents were already interested and aware of eTraining opportunities in the workplace and the results showed that 44% of organizations surveyed mentioned that the biggest hinder to the growth of eTraining in business is its cost with 43% claiming that lack of management buy-in hinders their organization from adopting such training techniques. However, despite the many current challenges anticipated for its implementation, eTraining is a growing trend and is expected to become crucial in meeting the challenges of the current knowledge-based economy which represents an opportunity for developing nations. Therefore, Egypt, while striving to integrate into the global economy, has taken the necessary steps to develop its information and communication infrastructure to develop its various sectors and amongst which education and training to cater for its growing population and to meet its various business and socioeconomic plans and objectives.

Internet Development in Egypt

Egypt is the cradle of an ancient civilization dating back to 3000 BC. It has a population of about 68 million with over 16 million in different education stages [Kamel, 2002]. Egypt has the second largest economy in the Middle East and has successfully implemented its economic reform program that has enabled its current growth rate to stand at 6.2% annually and an inflation rate of 2.1% [Kamel, 2001]. In today's competitive global environment, the extent and quality of its work force, human, and intellectual capital will determine Egypt's social and economic future development. Therefore, investing in its human resources is becoming a prerequisite for getting ready for the 21st century [Kamel, 2001]. Respectively, Egypt have invested heavily in human resource development and is currently ranked 17th

worldwide in the number of yearly graduates [Kamel, 2002].

Egypt is modernizing itself; thus, one of the main sectors the government is focusing on is the information and communication technology sector [www.idsc.gov.eg]. In that respect, the government, in 1999, established a new ministry for communication and information technology in order to catalyze the development of the industry leading to remarkable developments in the introduction and diffusion of information technology and is well on its way towards building an information-based society. Table 1 demonstrates statistics about the communication and information technology national that was published in January 2002 illustrating the growth ratios of the sector from 1999 to 2002 [www.mcit.gov.eg].

Table 1 - National Plan for Communication and Information Technology

Indicator	October 1999	January 2002	Proportion
Number of Internet users	300000	1000000	233%
International Internet Band Width	20 Megabit/sec	400 Megabit/sec	1900%
Monthly Internet Subscription	100 Egyptian pounds	Free with the price of local telephone call	
Number of CIT companies in Egypt	266	677	153%
Number of CIT employees in Egypt		4954	100%
Number of CIT skills Development Trainees	1200	44400	3600%
Number of IT Clubs	30	325	983%

The International Telecommunications Union Report in 2001 "Internet on the Nile - Case of Egypt" based its findings on a comprehensive model developed by the Mosaic group [Kelly, 2001]. The model provided a good view of the Internet status in Egypt in June 2000 that can be used to build on and forecast the development of the infrastructure in the years to come. The model considered 6 dimensions, each of which has five ordinal values ranging from zero [nonexistent] to four [highly developed]. These dimensions included: pervasiveness, geographical dispersion, sector absorption, connectivity infrastructure, organizational infrastructure, and sophistication of use.

Pervasiveness reflects a measure based on users per capita and the degree to which non-technicians are using the Internet. Pervasiveness is rated at level 2.5, between established and common. There are no known methodologically sound market surveys estimating the number of Internet users. However, in June 2000, there were 55000 Internet subscribers [www.mcit.gov.eg]. It is generally assumed that there is an average of four users per account in Egypt. This would place the number of users at around 220000, 0.37% of the population.

However, in January 2002 after the launch of the free Internet model the current number of users is estimated at 1,000,000 Internet Users and respectively, pervasiveness is rated at around 3.0.

Geographical dispersion reflects a measure of the concentration of the Internet within a nation. Geographic dispersion is rated at level 2.5, between moderately to highly disperse with around 60 Internet service providers [ISP] in June 2000 though most are located in Cairo; 18 out of 26 provinces have an ISP. In 2002, more ISPs were established in different provinces and the new free Internet model which already applies to some major cities will spread to include all provinces to allow anyone who has access to a phone and a computer to also have access to the Internet. With such developments geographical dispersion could soon reach 3.0.

Sector absorption reflects a measure of the degree of utilization of the Internet in a number of sectors including education, commerce, health care and public services. Sector absorption was rated in June 2000 at level 1.5, between rare to moderate. As of 2002, the government has made efforts to provide online content through the Cabinet Information and Decision Support Center (IDSC) as well as effort to move towards the eGovernment. Internet connectivity at Egypt's 18 universities is good through access by the Egyptian University Network. Moreover, connectivity at primary and secondary schools although still poor however is gradually spreading all over the nation. Additionally, among the business community, the use of the Internet is growing rapidly. With such developments, sector absorption is rated at about 2.5.

Connectivity infrastructure reflects a measure based on international and intra-national backbone bandwidth, exchange points and last mile access methods. In June 2000, the connectivity infrastructure was rated at 1.5 including thin and expanded national bandwidth was 14 Mbits/s and the total international bandwidth was 36 Mbits/s. Most access is via dial-up with some leased lines and ISDN connectivity. However, as of 2002, the total international bandwidth became 400 Mbits/s and still most access is via dial-up but with an increasing number of leased lines and ISDN connectivity leading the connectivity infrastructure to be rated at around 2.5.

Organizational Infrastructure reflects a measure based on the state of the ISP Industry and market conditions. It is at the level of 2.5 between controlled and competitive. There are theoretically no barriers to becoming an ISP. However, ISPs are restricted in the ability to provide national and international infrastructure. Telecom Egypt, which is a government corporation, controls the bulk of the international capacity. Regulations are not always clear or transparent. As of 2002, the situation in terms of organizational infrastructure has not changed much, however many

speculate that the introduction of the free Internet will put most of the small ISPs out of business (speculation that still need to be tested). Hence, so far organizational infrastructure is still rated at 2.5.

Sophistication of use reflects a measure characterizing usage from conventional to highly sophisticated and driving innovation. It is at level 2.0, conventional. Most web sites are static. The Internet has not yet transformed the majority of businesses. Starting 2002, the situation in term of sophistication of use has not changed much, hence is still rated at level 2.0. Figure 2 provides a demonstration of the Internet status in Egypt in June 2000 as well as the updated version shown in Table 2 and figure 3 showing the status in April 2002.

Figure 2 - Internet Status in Egypt (June 2000)

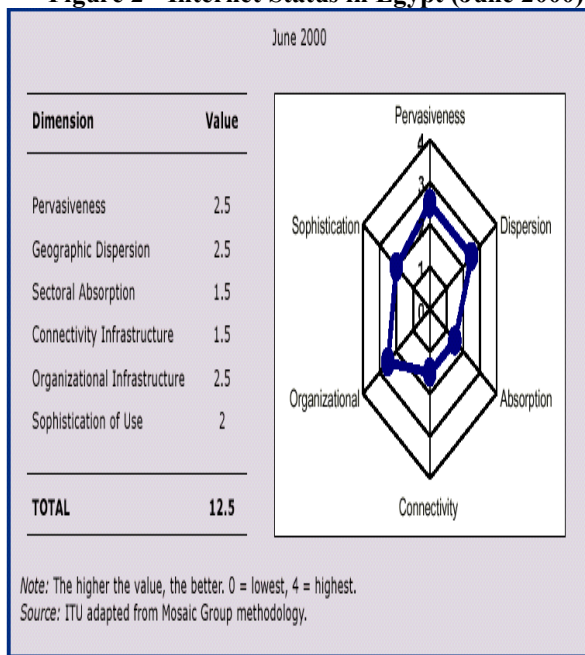
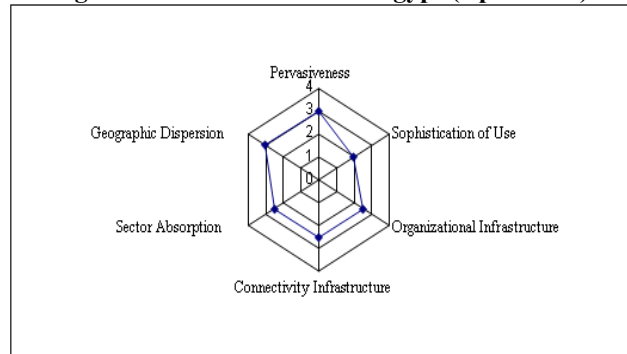


Table 2 - Internet Status Dimensions (April 2002)

Dimension	Value
Pervasiveness	3
Geographic Dispersion	3
Sector Absorption	2.5
Connectivity Infrastructure	2.5
Organizational Infrastructure	2.5
Sophistication of Use	2
Total	15.5

Comparing figures 2 and 3 clearly shows that the Internet Status in Egypt has improved a great deal in the period from June 2000 to April 2002 reflecting an enormous growth and development in Internet diffusion. However, it is yet to be seen whether such diffusion had an impact on different sectors or not taking the focus of this paper, training.

Figure 3 - Internet Status in Egypt (April 2002)



Electronic Training – Case of Egypt

The study of electronic training and its applicability and effectiveness in Egypt was conducted through the collection of available secondary data as well as the gathering of primary data through a market survey. The survey was mainly focusing on gathering opinions of three different stakeholders in an attempt to determine applicability of Internet-based training in corporations in Egypt. The stakeholders included; users, human resources managers and training managers as well as instructors. These stakeholders play important roles in the success of all training provided. Therefore, the information collected from these three groups was a major building block in determining the success or failure of Internet-based training. The information collected differed from one group to another because of the different roles played by each group therefore approaches used also differed.

Users “Beneficiaries of training”

The user is the individual that will undergo the training reflecting the most important player and plays a crucial role in the success or failure of training. Hence, it was important to determine his readiness and willingness to take courses provided through the Internet. The methodology used was mainly quantitative using a questionnaire that was designed, tested and e-mailed to 1878 individuals randomly selected through potential customers of training institutions such as the Regional IT Institute. The recipients had different backgrounds and working in different Industries. Most of the questions were closed ended aiming at gathering information about the demographics of users and whether or not there was a relation between demographics and applicability of Internet-based training; industries and areas of expertise and whether or not there was a relation between it and eTraining; computer, Internet skills and use; perceived advantages and disadvantages of eTraining; eTraining experiences and effectiveness and awareness of eTraining.

Human Resources and Training Managers

Human resources and training managers are those people responsible for setting training policies

within firms and deciding on the training to be provided and on the method to be used among other responsibilities. Thus, the decision to introduce and implement eTraining within corporations is made by them. The methodology used in data gathering was qualitative using in-depth interviews to be able to examine attitudes, feelings and motivations. There were 34 organized interviews with human resources and training managers in corporations from different industries coupled with a questionnaire that was e-mailed as attachment to 350 senior managers randomly selected from different databases. The interviews covered a set of open and closed ended questions aiming at gathering information about basic corporate information; information about the training offered by the corporation; identifying whether eTraining is applied or planned to be introduced and why; perceived advantages and disadvantages of eTraining; corporate readiness for eTraining; and implementation

Instructors

Instructors are responsible for preparing training material, facilitating and coordinating different courses. Their readiness and willingness to facilitate eTraining is crucial for its success. They are faced with a new challenge represented in the development of friendly web-based material and its continuous updating through online discussions, chat rooms, bulletin boards and e-mails. Therefore, their role will dramatically change as they transform into providing online or electronic training. The methodology used in data collection was mainly using a questionnaire that was designed and e-mailed to 68 professors from different universities and training institutions and in different specializations. The questionnaire included both open and closed ended questions aiming at gathering information regarding basic instructor information; areas more suitable for eTraining; use of ICT tools in teaching; perceived advantages and disadvantages of eTraining as a method; and, instructors' readiness for eTraining.

Research Findings

The research findings are organized according to the different groups surveyed and will be presented in the following order; users, human resources and training managers and finally instructors.

Users

The questionnaire was sent to 1878 individuals, representing the users category. 85 recipients replied reflecting 4.5% of the total which was a small ratio but more than expected. In terms of demographics, from 85 respondents, 44 were males and 41 females reflecting an almost equal division. Respondents fell under different age groups but the majority, 53%, were in the 25-34 years

category. Table 3 and figure 4 show the respondents' distribution by gender and age.

Table 3 - Respondents' Demographics

Age	Male	Females	Total
15-24	3	9	12 (14.1%)
25-34	31	22	53 (62.4%)
35-44	9	3	12 (14.1%)
45-54	4	1	5 (6%)
55-more	2	0	2 (2.4%)
Total	44	41	85

Figure 4 - Respondents' Demographics

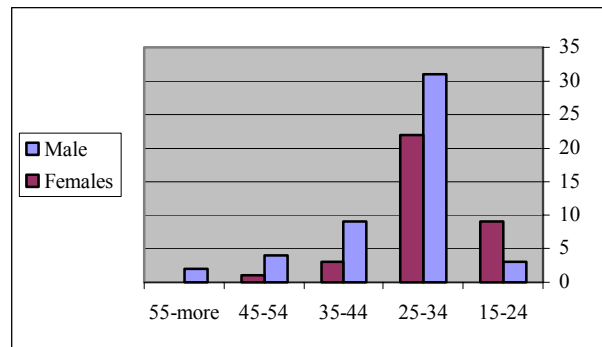


Figure 5 highlights the IT and Internet skill level of respondents showing that 93% of the respondents are professional or smart users of IT, 96% are frequent Internet users and 98% are comfortable with the Internet.

Figure 5 - IT and Internet Skills of Users

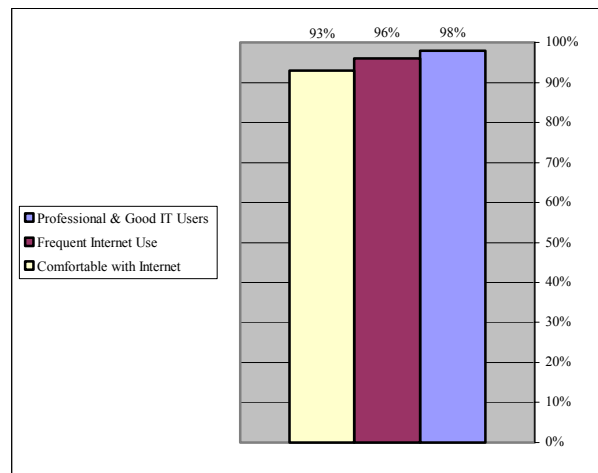
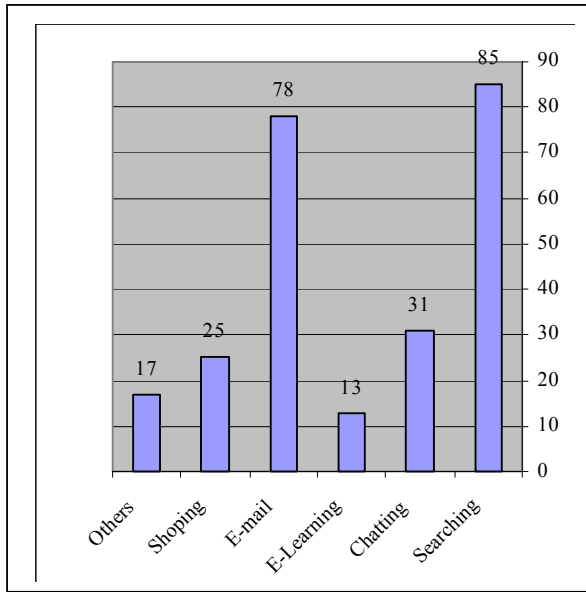


Figure 6 points out the Internet usage which is mainly for gathering information and electronic mail, which points out the low sophistication of use of the Internet technologies in Egypt. Both figures 5 and 6 conclude that the sample that is being studied has no problem in terms of using IT and the Internet, or in terms of access to a computer and the Internet.

Figure 6 - Internet Usage



With respect to Internet-based training, only 17 (20%) of the respondents have experienced eTraining before; 9 of which highlighted that it is as effective as conventional courses however they mentioned that it all depended on the way the course was developed and the perception of the user himself. Most of such eTraining experience was in IT courses. Figure 7 demonstrates according to the survey who would consider taking courses online based on age brackets showing a majority of respondents (54 out of the 85) willing to undertake eTraining even for a trial. The majority of those were aged in the bracket of 25-34 years. It is important to note that in terms of eTraining providers awareness, 73% of the respondents have not heard of any institute that provided eTraining and the remaining 27% expected a series of institutes that would mostly likely be primary candidates to provide such service including the Regional IT Institute and the Information Technology Institute.

Table 4 points out the advantages of eTraining as perceived by users (the first being the highest advantage). The main perceived advantages were flexibility followed by geographical reach. Most respondents pointed out that being able to take the session any time, anywhere and at one's own pace was a very attractive feature of online training especially for anyone employee who wants to improve his/her skills but is however constrained by his/her workload.

The survey showed that the main barriers for eTraining implementation from a user perspective were basic literacy, computer literacy, eTools availability, Internet performance, user support and trained eFacilitators as well as the lack of one-to-one interaction, lack of accreditation where Internet-based education and distance education in general are mostly not yet accredited.

Figure 7 - Who considers taking an online course?

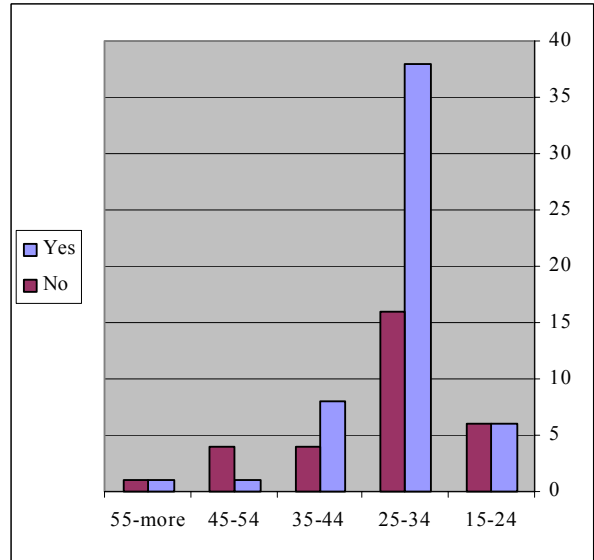


Table 4 - Advantages of eTraining

Advantages	1st	2nd	3rd	4th	5th	6th
Cost Saving	6	12	15	12	16	8
Easily Accessible	16	14	15	14	8	2
Flexibility	28	13	11	6	5	6
Geographical Reach	10	22	11	11	5	10
Interactive	6	2	9	9	14	29
Ease of Update	3	6	8	17	21	14

Human Resources/Training Managers

A request for an interview was e-mailed and faxed to 34 human resources and training managers. Additionally, a questionnaire was e-mailed to 350 managers. Most respondents highlighted the importance of training in organizational development where all corporations investigated had 150 employees or less. Only 2 of the organizations tested totaling 34 were providing eTraining; one in the ICT sector and another in the automotive industry with 3 more corporations in the process of implementing an eTraining system including 2 in the ICT sector and 1 university. It is important to note that all organizations that had or were planning to implement eTraining had an affiliation of some sort with a multinational. In 8 corporations representing 24% most of the employees had computers as for the rest of the corporations, computing existed however not for all employees. All corporations surveyed had intranets as well as Internet accessibility based on leased line connections; 20% of these corporations had Internet accessibility restricted to management staff.

Most respondents pointed out cost reduction, easy accessibility and flexibility, geographical reach as

the main advantages (with cost reduction as the highest advantage) for eTraining. As for the barriers, the survey showed that basic literacy and language, computer literacy, access to a computer and the Internet, availability of eTools and support were not considered as the real barriers as they could be overcome easily and in most cases were already available. Security was considered the least of barrier. However, the main perceived disadvantages was the lack of one-to-one communication, which was perceived as vital as well as the lack of management support that are reluctant to foster change. 35% of the respondents pointed out that most managers in Egypt think based on short-term planning and mostly ignore long-term strategies and visions. Therefore, unfortunately, training is mostly perceived as not crucial and that in times of recession the first thing being cut down is the training budget. 55% of the respondents considered introducing eTraining mainly for the reasons of cost efficiency, ease of access and flexibility as for the remaining 45% respondents did not consider introducing it as they believed that the conventional classroom method is far better for the fact that one-to-one contact is perceived as crucial in the training; 25% of the respondents were unaware of the existence of eTraining providers.

Instructors

An e-mail with the instructors' questionnaire was e-mailed to 69 professors of the Regional IT Institute and The American University in Cairo (2 of the leading educational institutions in Egypt). 52 responded representing 75%. The respondents were from different specializations such as economics, mass communication, computer science, engineering, management information systems, marketing and physics. Such variety was very useful in determining whether eLearning is more applicable to some areas more than others. The results of the survey showed that all respondents had good information technology skills and were frequent Internet users, and comfortable with it. Respectively, all respondents had no major problems in terms of readiness for eTraining as the basics necessities were covered.

90% of the respondents used the Internet in their teaching to provide useful Internet links, request students to gather information from the Internet, send and receive assignments and material through e-mail, post material and assignments on the web site and/or on bulletin boards. Although the Internet is used in teaching, however all the instructors used it only as a source of information. Only 40% of the respondents had a personal and/or a course website. Only in one case, the instructor used Internet-based training with a course titled "online journalism". The course was Internet-based with a web site, used a bulletin boards, e-mail and all assignments were web related. Although only one actually applied eTraining, it is interesting to note that 28% of

respondents pointed out that they were considering moving to eTraining.

With respect to the advantages, flexibility in terms of time availability and scheduling, great ease of updating material, ease of access and broad geographical reach were the main perceived advantages from the instructors' perspective. The least perceived advantages were interactivity and cost saving because it is widely believed that online courses do not really save cost. As for the disadvantages, the perceived barriers to eTraining included the following ordered respectively from the highest perceived barrier to the lowest; computer literacy, basic literacy and language, one-to-one contact, user support, management support, availability of trained facilitators, access to a computer and the Internet, Internet performance, availability of eTools and finally the least perceived barrier was security. Most instructors were aware of eTraining providers such as The American University in Cairo, the Regional IT Institute and Raya Academy.

SWOT Analysis of eTraining in Egypt

The findings of the survey conducted as well as the input of different case studies helped formulate the following SWOT analysis for eTraining in Egypt.

With respect to strengths, eTraining provides many advantages to all stakeholders involved. Employees can study any time and anywhere allowing them to complete courses from their home or office and further increasing their ability to fit learning into their schedule while ensuring the same standard of training as in-class sessions. eTraining offers high cost savings by reducing travel expenses required as well as saving time. Additionally, course materials can easily be updated at no extra cost and can reach employees on real-time basis. Instructors also benefit from eTraining by exerting some additional effort to prepare the course materials suitable for online training; however they benefit from the greater ease of updating it and can also reach a higher volume of student body online.

With respect to weaknesses, there are a set of barriers to the implementation of online training from all stakeholders' perspectives. This includes the fact that employees, in order to be able to complete an online course, need to be eReady meaning the availability of basic literacy as well as computer and Internet literacy. Moreover, employees must be self-motivated and have good time management skills to be able to manage and organize their eLearning process. Moreover, most employees believed that eTraining lacks the one-to-one interaction that is crucial for learning especially to cater for the culture in the local market in Egypt which puts more weight on the presence of the instructor and on one-to-one interaction between instructors and trainees. Additionally, employees expressed the importance of accreditation which eTraining still does not possess.

Human resources and training managers have a large commitment from their side to successfully introduce eTraining. This includes their willingness to support such a paradigm shift that will only provide results on the long run. They have to provide eTraining tools, access to computers and the Internet, and finally online user support. Moreover, they have to provide training and orientation for the new tools and train online user support staff on the new technologies and the ability to handle user inquiries. They should also overcome resistance to change and direct users and higher management towards successful implementation of eTraining. Instructors should have to exert additional effort to adapt their material to suit online education and adopt training techniques different than those used in normal classroom. Thus, instructors have to train themselves to become an online facilitator.

With respect to opportunities, through eTraining, corporations have the opportunity to train their employees wherever and whenever is needed at a reduced cost where continuous training, which can be easily attained through eTraining, is becoming crucial for survival and competition. There is a continuous development and research for technologies that increase reliability and applicability of eTraining worldwide; and there is rapid development of communication and information technology in Egypt in particular.

With respect to threats, eTraining is a new paradigm that needs to get acceptance in order to be implemented that includes interest and willingness for change because lack of interest from various stakeholders constitutes a major threat. Another threat is the fact that equipment and technology requirements restrict adoption of eTraining. The absence of computers with required software and Internet access and performance are essential requirements to implement eTraining. Finally, the lack of human interaction might deter the learning process using eTraining.

Conclusion and Recommendations

Each stakeholder plays an important role in the successful implementation of eTraining. Following is a set of conclusions and recommendations developed based on the findings of the survey conducted to allow the realization of the targeted objectives from eTraining in Egyptian corporations.

With respect to users, they need to determine whether online training is a good method to increase their knowledge and skills. The survey results showed that most Egyptian users prefer conventional courses to be able to work directly with the trainer, instead of working primarily on their own, which is a cultural element. Weights are placed on the class presence of the instructor, on the communication between trainer and trainee and among peers. eTraining lacks the feel of human presence and interaction that a vital success element in the

educational process. Within eTraining, more burdens are put on the trainee for self-motivation and discipline which is difficult culturally in Egypt. Therefore, the users need to learn to motivate themselves by identifying what they want out of the course and the benefits they wish to receive.

With respect to human resources and training managers, online training is a paradigm shift, an innovation. They need support from higher management. Unfortunately, in Egypt training is not viewed as a driver of growth which places a higher burden on the person in charge of training to convince higher management about eTraining and how to adapt to change. It will be important to determine the training needs of users and provide the training programs that will help satisfy those needs. The survey results showed that complete online training is not really a very effective solution for the Egyptian culture, thus a hybrid mode with online training supported with a reduced number of contact sessions is a better delivery mode that will attract more participants. Moreover, evaluation and improvement of the training medium are very important; thus, it is essential to install proper evaluation techniques and to monitor the training process and evaluate outcomes, and to use the feedback from different parties involved to correct errors and to improve the system.

From the instructor's perspective, instruction and training material are the determining success factors of online courses. In Egypt, most instructors will face the problem of being able to change their role. Online courses require several skills and abilities such as the ability to learn new technology and the flexibility and time to create new material and methods. eTraining tools are many and keep evolving and instructors should optimize such innovations. Respectively, instructors should be continuously willing to learn how to use innovative tools. Instructors should update their materials frequently and keep checking the applicability and availability of resources used in their courses. Finally, much effort must go into the initial planning and development of online training materials and setting up the mechanics of sending and receiving information between learners and trainers.

To conclude, the continuous developments in information and communication technology have had remarkable implications on the learning process at large including education and training. Respectively, with the increasing competition worldwide, corporations will revert to innovative technologies such as online education to save on cost and maximize on productivity and effectiveness. However, it is important to note that further research is required to determine the different teaching methodologies that can be used for effective learning in the cyber environment. More testing to the effectiveness of eTraining needs to be implemented to realize optimal benefits from the learning process.

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